

REMARKS

During a telephone discussion with Examiner Tawfik on June 12, 2007, the undersigned requested the opportunity to conduct an interview with the Examiner. Examiner Tawfik indicated that it was his position not to grant interviews after a Final Office Action because, in the Examiner's opinion, virtually any proposed changes to the claims would be held to be ones that raise new issues and would require additional searching. The Examiner urged the undersigned to either file a Notice of Appeal or to file a Request for Continued Examination. Since the newly raised rejection of the claims under 35 USC 112, first paragraph, in the Final Office Action, is a very serious rejection and since the opportunity to address that rejection on appeal, without the presentation of arguments prior the filing of the Notice of Appeal, are limited, the undersigned is concurrently filing a Request for Continued Examination. The undersigned and Examiner Tawfik agreed that the Examiner would be willing to grant an interview to the undersigned, after the filing of the above-mentioned Request for Continued Examination and the present Second Amendment, if such an interview were believed appropriate to place the claims in condition for allowance.

In the Final Office Action of March 26, 2007, all of the claims pending in the application were rejected under 35 USC 112, first paragraph as containing subject matter which was not described in the specification in such a way as to enable one to make and/or use the invention. It was specifically asserted that in lines 16-19 of claim 1 (which is believed to be independent claim 42), the recitation of "...a second surface layer of a micro-porous, air permeable material on said support surface of said nose section,... 500 μm ," is not supported in the specification. The Examiner noted, in part, that the specification refers to hollow chambers 07, 07' for the nose but that "no where in the specification is referred to the now added limitation of 'a second surface layer of a micro-porous, air permeable material on said support surface of said nose

section” (emphasis added).

Initially, it is noted that it is well established that the claims originally filed with a patent application form a portion of the disclosure of the application. Claim 42, as set forth in the Preliminary Amendment filed with the application, recited, in part, “a first coating of a micro-porous material on said surface of said leg areas.” See claim 42, lines 6-7. Claim 42, as filed, also recited “a second coating of a micro-porous material on said surface of said nose section.” See lines 10-11 of claim 42. The first coating on the leg surface areas was recited, in claim 42 as originally filed, as having a first fluid permeability per unit area. The second coating on the surface of the nose section was recited as having a second fluid permeability per unit area, with that second fluid permeability being greater than the first fluid permeability. It is clear that the language of claim 42, as filed, recited first and second coatings of different permeabilities.

Claim 42 was amended to recite first and second surface layers instead of first and second coatings. It is not believed that the change of the term “coating” to the term “layer” can be what has given rise to the 35 USC 112, first paragraph rejection. The Substitute Specification, at paragraph 017 thereof, recites that the surface area of the former, of which the leg areas and the nose section are all parts, has a rigid air-permeable support in the appropriate area, to which support the micro-porous material has been applied as an outer layer, (emphasis added). The term “surface layer” instead of “coating” is clearly supported by the Substitute Specification.

Paragraph 0020 of the Substitute Specification recites that a side of the former which faces the web could be embodied as an insert or as several inserts placed in a support. Again, the substitute specification, recites the use of inserts of differing micro-perforations.

Paragraph 0027 of the Substitute Specification recites that the former 01 has a support body 08 which is air-permeable and on which the micro-porous material 09 has been applied as

a surface layer 09. The support body 08 can be charged with compressed air which flows out of the micro-porous layer 09 and forms an air cushion "...at the surface of the leg area 03 or the nose section 04." (Emphasis added.)

Paragraph 0035 of the Substitute Specification describes an embodiment of the present invention, as depicted in Fig. 4. Micro-porous, air-permeable materials 09, 09' of different properties are used for the layer 09 in different areas of the former 01. "The layer 09' in the nose section 04 of the former 01 is embodied in such a way that, for example, the exiting air flow per unit of area is greater in the nose section 04 than it is in...the leg area 03 of the former."

Referring to Fig. 9, it is clear that these layers 09 are surface layers since they are on the surface of the former 01. Paragraph 0027 specifically refers to the micro-porous material as a surface layer 09.

Paragraph 0035 of the Substitute Specification also recites that since the materials 09 and 09' are of different properties or thicknesses, the air output in the nose section 04 is greater than the air output in the leg areas. This is clear support for the language of claim 42 that the second surface layer on the support surface of the nose layer of the former has a second fluid permeability which is greater than a first fluid permeability of the surface layer on the support surfaces of the leg areas. The higher air flow of the nose area, as recited at the end of paragraph 0035 is a result of the differences in the air permeability of the micro-porous, air-permeable materials 09, 09' which are recited as being surface layers placed on the support surface 08 of the leg areas and the nose section of the former support body.

It is respectfully but strenuously asserted that the rejection of the claims under 35 USC 112, first paragraph is not correct and should be withdrawn. As discussed above, every term that is set forth in currently amended claim 42 finds clear support in the Substitute Specification

and the drawings of the subject application. It is believed that the rejection of the claims on the basis of 35 USC 112, first paragraph is incorrect and should be withdrawn.

Turning now to the rejections of the claims, under 35 USC 103(a) as being unpatentable over DE 198 29 095 to Lang, it is again strenuously asserted that the Lang reference shows a very different structure, usable to perform a very different task than that which is recited in the claims, and which is described in the specification of the subject application. In the prior Amendment, a substantial amount of time was directed to a discussion of the structure of the Lang device. Based on a review of the Response to Arguments section of the Final Office Action of March 26, 2007, that discussion was either not read or was disregarded.

In the Response to Arguments, it is asserted that the Lang reference is capable of processing a web. It is further asserted that Lang discloses the claimed machine elements so that the use of webs or sheets is just an intended use.

In response, it is very well established in the printing art that there are two very distinct types of printing machines, ones that print on individual sheets and ones that print on a continuous web. It is true that both are printing machines. However sheet fed machines are not usable to print on webs and web-fed machines are not usable to print on sheets. In the Lang patent, which is entitled "Sheet guide device for printing press," there is disclosed a sheet-fed printing press. As discussed in the prior Amendment, the press includes a printing section 14 and two laquer sections 15 and 16. The separate sheets are printed in the printing section 14 and then are lacquered or varnished or otherwise coated in the two sections 15 and 16.

Referring to Fig. 2 of the Lang reference, in each of these three sections, there are provided two separate sheet guide devices 6 and 7. A first sheet guide device 6 is located in an entry area to a printing gap 22. A second sheet guide device 7 is located in an exit area from the printing gap 22. These two sheet guide devices 6 and 7 function separately from each

other. They are two separate, individual guide devices. In other words, the sheet-fed printing press depicted and described in the Lang reference could function if one or the other of the two separate sheet guide devices 6 or 7 were absent from its associated one of the units 14, 15 or 16.

The function of each sheet guide 6 or 7 is to maintain a sheet, which is to pass through the printing gap 22, flat against the cylinder 1. Each such sheet guide 6 or 7 performs its task by directing air out through a micro-porous guide surface 10 of the individual or separate sheet guide 6 or 7. The guide surface 10 extends along the side of its individual or separate sheet guide 6 or 7 which is adjacent the surface of the sheet guide cylinder 1. Since each sheet guide 6 or 7 is situated in either an entry or an exit to the printing gap 22, it is shaped somewhat like a wing. In the cross-sectional view of Fig. 2. Each individual sheet guide 6 or 7 is movable about a swivel joint 8. The axes of the swivel joints 8 for the two sheet guides 6 or 7 are parallel to each other and are parallel to the axes of rotation of the cylinders 1, 2 and 12.

In the Response to Arguments, it was noted that the undersigned had previously argued that the two sheet guide devices 6 and 7 are parallel to each other and do not converge with respect to each other (emphasis added) to define a nose section. The Examiner then states that the "...guide devices 6 and 7 as almost making a V-shaped are not parallel to each other instead they are converging by the bottom portion to form a nose section, as disclosed in Fig. 1."

It is quite clear that the first sheet guide device 6, which is located to the right in Fig. 2, is parallel to the second sheet guide device 7, that is located to the left in Fig. 2. Fig. 2 is merely an enlarged view of a portion of the overall device shown in Fig. 1. Since the two rollers 1 and 2 or 1 and 12, in each of the units 14, 15 and 16 must have at least a length sufficient to print a sheet, it would be physically impossible for the two separate sheet guides 6 and 7 not to be

parallel with respect to each other, and with respect to the axes of rotation of the cylinders 1, 2 and 12 with which they cooperate. The Examiner is clearly incorrect in his assertion that the guide devices 6 and 7 together make a V-shape and are not parallel.

It is assumed that the Examiner means that in each of the two separate sheet guide devices 6 and 7, there are walls that do form a V-shape. In Fig. 2, it is clear that the micro-porous guide surface 10 of each of the two separate sheet guide devices 6 and 7 is generally parallel to the surface of the cylinder 1. It has to have essentially a complementary shape so that it can function to hold the sheets against the surface of the cylinder 1. A rear wall of each sheet guide 6 or 7 faces away from the printing gap 22 and a portion of the micro-porous guide surface 10 of each sheet guide 6 or 7 extends around a curve 9. An upper wall of the housing 11 for each sheet guide 6 or 7 closes the interior chamber 23 of each sheet guide. That upper housing wall and the guide surface 10 of each of the two separate sheet guides 6 and 7 (emphasis added) converge at a front edge 21 of each separate one of the two sheet guides 6 and 7.

In the Lang device, as discussed above, the purpose of the two sheet guides 6 and 7 is to insure that the plurality of sheets that pass through the printing gap 22, in a sequential fashion, are each held against the surface of the sheet guide cylinder 1. If the Lang device were to be used with an endless web instead of with individual sheets, the sheet guides 6 and 7 would be unnecessary. As seen in Fig. 1, the Lang printing press has three units 14, 15 and 16 spaced along a path of travel of sheets, which sheets enter at the right, as seen in Fig. 1. If Lang were to be adapted to be used as a web-fed press, the endless web would be held against the surfaces of all of the cylinders 1 and against the surfaces of the transfer rollers or transfer drums 17 by web tension. However, since the Lang device is directed to a sheet fed printing press, the leading edges of the individually conveyed sheets need to be pushed against

the surface of the guide cylinders 1. The individual, separate sheet guide devices 6 and 7 each insure that the individual sheets stay flat on the cylinders.

The Lang device does not disclose or even remotely suggest a longitudinal web former of a web-processing machine, as asserted in the Final Office Action. As the Examiner may or may not understand, a longitudinal web former is a generally triangular device or structure that is located after, in a direction of web travel, the various printing units which have cooperated to print a web. It could not physically be located in a position similar to that in which the two separate sheet guides 6 and 7 of Lang are located.

The purpose of a longitudinal web former is to form a longitudinal fold in the endless web, prior to its being cross-cut and further folded. The longitudinal fold former depicted in all of the various embodiments of the subject invention, is located after all of the printing units and is generally in the form of a triangle whose conveying leg areas 03 terminate at a nose section 04. The former is thus generally in the shape of a triangle positioned on its apex. That apex is the nose 04. The endless web 06 to be formed or folded longitudinally, as seen at 06 in Figs. 1, 3, 6, 8, 9 and 10, passes down over the face of the triangle. As it does so, the shape of the triangular fold former, in conjunction with the traction roller pair 02, folds the web 06 longitudinally in its direction of travel. The purpose of the leg areas and of the nose area of the longitudinal web former support body are to support and to form the web. The purpose of the air permeable material on the web support surfaces is to reduce frictional forces that would be generated by the passage of the web over the former. The purpose of the use of surface layers of different air permeabilities is to insure that the frictional force at the nose is less, by the use of a greater fluid permeability, than that of the leg areas. This will insure that the web will not drag across the nose and will not wrinkle or back up.

Claim 42, as currently amended, recites a longitudinal web former support body. This

body includes first and second leg areas and a nose section. The Lang reference does not disclose or suggest a longitudinal web former. Instead, it shows two separate sheet guides 6 and 7. While each of these two sheet guides are somewhat triangular in cross-section, they do not form a single body. They are two separate bodies. The leg areas 10 of each of the two separate sheet guides 6 and 7 do not support a web. They do not support individual sheets. They function to push sheets away from the separate sheet guides 6 and 7 and into contact with the cylinder 1.

The Final Office Action asserts that the sheet guides 6 and 7 have first and second rigid air permeable leg area support surfaces, via “bores 2 and 3.” In fact, reference numerals 2 and 3 are cylinders that cooperate with the cylinder 1 to print or coat the individual sheets. They are not bores and do not act as air conduits.

The Final Office Action further asserts that the support body allegedly formed by the two separate and distinct sheet guides 6 and 7 has a nose section, which is identified as “...via nose section at the lower portion of Fig. 1.” In fact, each of the two separate sheet guides 6 and 7 could be argued as having a nose section. However, that “nose” would be the front edge 21 of each of the two separate sheet guide devices 6 and 7.

Claim 42 recites first and second converging leg areas on the former support body. The Examiner’s assertion that elements 6 and 7 of Lang are converging leg areas on a former support body is clearly not correct. There is no longitudinal web former support body disclosed, or suggested in the Lang reference. The Lang device discloses two separate sheet guides 6 and 7. While each of these separate sheet guides 6 and 7 has an air permeable guide surface, generally at 10, those two separate guide surfaces 10 are not first and second converging leg areas of a single longitudinal web former support body. The Examiner asserts that Lang shows “...former plate 1 with inner bores 2 and 3 along the edges...” In fact, as discussed above, the

element 1 of Lang is a sheet guide cylinder and the elements 2 and 3 are both cylinders. The Examiner's mis-interpretation of the Lang reference is not understood in this regard.

Claim 42 of the subject application recites that the first air permeable surface layer on the leg areas of the former support body and the second air permeable surface layer on the nose section of the support body are of different permeabilities. It is further recited, in currently amended claim 42, that the nose section permeability is greater than is the permeability of the leg areas.

In the final Office Action, the Examiner asserts that Lang has the leg areas "...via former plate 1 and bores 2 and 3..." with a first fluid permeability per unit of area. It is further asserted that Lang shows a second surface layer of air permeable material on a support surface of the nose, referring to "... (Fig. 1; via 12-15)..."

Element 12 of Lang is a transfer cylinder that is usable to transfer ink images from a plate cylinder 13 to a sheet, as that sheet pauses between the transfer cylinder 12 and a sheet guide or support cylinder 1. Reference numeral 12 of Lang denotes the overall printing section that includes the plate cylinder 12, the transfer cylinder 13 and the sheet guide or support cylinder 1. Reference numeral 15 denotes a laquer unit which is usable to supply a surface coating to sheets which were previously printed in the printing section 14. There is no support in the Lang reference for the Examiner's assertion that either of the two separate sheet guides 6 or 7 has sections of differing air permeability. As far as can be determined, the permeability of each microporous guide surface 10 of each of the two separate sheet guide devices 6 and 7 is uniform along its length.

Claim 42 recites a mean diameter of the air permeable material, and the provision of different areas of different fluid permeabilities. The Examiner acknowledges that Lang shows neither of these claimed features and reverts to an "obvious to one of skill in the art" argument.

The Substitute Specification specifically discusses why the use of micro-openings, with a high hole density, is important in the subject application. The Examiner's attention is directed to paragraphs 0014-0018 of the Substitute Specification. The claimed diameter of the open pores is not obvious to one of skill in the art and is not shown or suggested in Lang.

The limitations of the various dependent claims of the subject application are discussed in the Final Office Action as either obvious or involving mere experimentation. For example, claim 46 recites that the micro-porous air permeable material is an open-pored sinter material. The Examiner makes an unsupported assertion regarding "air pipes." Lang does not show or suggest any air pipes. Further, the Examiner sets forth "...that it is inherent such pipes are metal pipes..."

In Lang, the guide surface 10 of each of the two separate sheet guide devices 6 and 7 is recited as being microporous. Note the parts list portion of Lang at Column 5, lines 15-40. There is no discussion in Lang as to the material used to make this microporous guide surface. Contrary to the Examiner's unsupported assertion, all pipes are not metal and there is no teaching, or suggestion in Lang of the use of a sinter material or a sinter metal. The term "sinter" describes a process for making an article. It has a specific meaning and Lang does not show or suggest such a process, or product.

Throughout the rejections, the Examiner refers to element 1 of Lang as a support body. As discussed above, the element 1 of Lang is a sheet guide cylinder or a pressure cylinder. It cooperates with a cylinder 12 in section 14 or with a cylinder 2 in sections 15 and 16, to apply a coating to sheets as the sheets pass through the printing gap 22. The claims of the subject application recite a longitudinal web former support body. As discussed above, that body is used to form a longitudinally extending fold in a web of paper, after it has been printed and before it is cross cut and further folded. The cylinders 1 of Lang are not even remotely similar to

a longitudinal web former support body.

Currently amended claim 42 sets forth a device that is very different from the device disclosed in the Lang reference DE 198 24 095. One of skill in the art would clearly understand that a longitudinal web former is not similar in either structure or function to a sheet guide for a sheet-fed printing press. One of skill in the art would understand that the two separate sheet guide devices 6 and 7 of Lang are separate elements which function independently of each other. One of skill in the art would understand that the two sheet guide devices 6 and 7 of Lang do not converge, with respect to each other and do not form a nose section at their non-existent point of convergence. One of skill in the art would readily understand that the use of two surface layers of micro-porous material, with certain pore diameters and fluid permeabilities is not merely a discovery of optimum values. Claim 42 is clearly not obvious to one of skill in the art over the Lang reference.

All of the other claims currently pending in the subject application depend either directly or indirectly from believed allowable, currently amended claim 42. The various features recited in these claims are not shown or disclosed in the Lang reference, as that reference is understood by the undersigned. All of these claims are thus also believed to be allowable.

SUMMARY

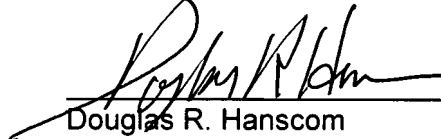
Claim 42 has again been amended in a further effort to patentably define the subject invention over the prior art cited and relied on by the Examiner. A Request for Continued Examination has been filed to provide the Examiner with the opportunity to carefully review the subject Second Amendment and specifically the discussion regarding the differences between the subject invention, as recited in the claims, and the Lang reference. It is hoped that the Examiner will avail himself of this opportunity.

Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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